

WHAT IS CLAIMED IS:

1. A vortex flow meter for measuring fluid flow comprising:

- a conduit for carrying a fluid;
- a region of reduced thickness in a portion of the conduit;
- a shedding bar disposed in the conduit coupled to the region of reduced thickness and configured to apply a rocking motion to the region of reduced thickness about a pivot line in response to flow of the fluid; and
- at least one reinforcing rib on the region of reduced thickness and extending parallel to flow of the fluid.

2. The vortex flow meter of claim 1 wherein the reinforcing rib is disposed on one side of the region of reduced thickness parallel to the pivot line.

3. The vortex flow meter of claim 2 further comprising:

- a second reinforcing rib extending parallel to flow of the fluid and positioned on an opposing side of the pivot line relative to the at least one reinforcing rib.

4. The vortex flow meter of claim 1 further comprising:

a sensor coupled to the region of reduced thickness for sensing the motion thereof to provide an output indicative of the flow.

5. The vortex flow meter of claim 1 wherein the at least one reinforcing rib is positioned at approximately a midpoint between the pivot line and an edge of the region of reduced thickness.

6. The vortex flow meter of claim 1 further comprising:

a center rib extending parallel to flow of the fluid and positioned on the pivot line.

7. The vortex flow meter of claim 6 further comprising:

a post disposed outside of the conduit and coupled to the center rib.

8. The vortex flow meter of claim 7 further comprising:

a sensor coupled to the post for sensing the motion thereof to provide an output indicative of the flow.

9. The vortex flow meter of claim 1 wherein the at least one reinforcing rib has a height approximately equal to a thickness of the region of reduced thickness.

10. The vortex flow meter of claim 1 wherein the at least one reinforcing rib extends from edge to edge across the region of reduced thickness.

11. A vortex flow meter for measuring fluid flow comprising:

- a conduit for carrying a fluid;
- a region of reduced thickness in a portion of the conduit;
- a shedding bar disposed in the conduit coupled to the region of reduced thickness and configured to apply a rocking motion to the region of reduced thickness about a pivot line in response to flow of the fluid; and
- at least one reinforcing rib extending parallel to the pivot line from edge to edge across the region of reduced thickness.

12. The vortex flow meter of claim 11 and further comprising:

- a sensor coupled to the region of reduced thickness for sensing the motion

thereof to provide an output indicative of the flow.

13. The vortex flow meter of claim 11 wherein the at least one reinforcing rib is positioned at approximately a midpoint between the pivot line and a circumferential edge of the region of reduced thickness.

14. The vortex flow meter of claim 11 further comprising:

a center rib coupled to the area of reduced thickness and positioned on the pivot line.

15. The vortex flow meter of claim 14 further comprising:

a post disposed outside of the conduit and coupled to the center rib; and
a sensor coupled to the post for sensing the motion thereof to provide an output indicative of the flow.

16. The vortex flow meter of claim 11 further comprising:

circuitry coupled to the sensor and adapted to communicate the output of the sensor to a control center.

17. The vortex flow meter of claim 11 further comprising:

a second reinforcing rib extending parallel to the pivot line and positioned on an opposing side of the pivot line relative to the at least one reinforcing rib.

18. A vortex flow meter for measuring fluid flow comprising:

a conduit for carrying a fluid;
a region of reduced thickness formed in a portion of the conduit;
a shedding bar disposed in the conduit coupled to the region of reduced thickness and adapted to apply a rocking motion to the region of reduced thickness about a pivot line in response to flow of the fluid; and
at least one reinforcing rib on the region of reduced thickness.

19. The vortex flow meter of claim 18 further comprising:

a sensor coupled to the region of reduced thickness for sensing the motion thereof to provide an output indicative of the flow.

20. The vortex flow meter of claim 19 further comprising:

circuitry coupled to the sensor and adapted to communicate the output of the sensor to a control center.

21. The vortex flow meter of claim 18 wherein the at least one reinforcing rib is positioned at approximately a midpoint between the pivot line and an edge of the region of reduced thickness.

22. The vortex flow meter of claim 18 wherein the at least one reinforcing rib extends less than a full length of the region of reduced thickness.

23. The vortex flow meter of claim 18 further comprising:

an center rib coupled to the area of reduced thickness and positioned on the pivot line.

24. The vortex flow meter of claim 18 wherein the region of reduced thickness has a diameter D and wherein the at least one reinforcing rib is positioned at a distance $0.25D$ from an edge of the region of reduced thickness.

25. The vortex flow meter of claim 18 further comprising:

a second reinforcing rib extending parallel to the pivot line and offset from the at least one reinforcing rib and from the pivot line.

26. The vortex flow meter of claim 25 wherein the at least one reinforcing rib and the second reinforcing rib are positioned on opposing sides of the pivot line.

27. The vortex flow meter of claim 26 wherein the at least one reinforcing rib and the second reinforcing rib are offset by a substantially equal amount.

28. The vortex flow meter of claim 18 wherein the region of reduced thickness has a thickness, and wherein the at least one elongate reinforcing rib comprises:

dimensions of width and height, such that width and height are approximately equal to the thickness.